



ABSTRACT AND BIOGRAPHY

Management of Service Projects in Support of Space Flight Research

Unlike typical projects that forecast predictable deliverables and result in discrete products, service projects afford multiple management challenges due to significant differences in aspects such as project definition, relevant metrics, life cycle, financial planning and control, ending criteria, schedule, requirements, and risk. In contrast to traditional project planning models with sequential flows and rigid processes, service projects require application of alternative project management methodologies relative to the conventional paradigm described in the PMBOK Guide.

Service projects are integral parts of the project-focused approach being utilized by NASA's Human Research Program (HRP). HRP is aimed at characterizing human health and performance standards, and providing countermeasures to enable safe, reliable, and productive human space exploration. It employs a project-based strategy to address knowledge gaps, balancing laboratory research, ground analog investigations, and space flight experiments to understand and mitigate the effects of the space exploration environment on the human system. HRP's service projects include the Flight Analogs Project (FAP) and the International Space Station Medical Project (ISSMP). ISSMP functions to implement research requiring access to space, maximizing the return of essential human system risk-reduction information. ISSMP has been developing agile, adaptive, evolvable management approaches in support of research from multiple customers, with its inherent ambiguities, to optimally utilize space flight platforms that exhibit varying, and often severe, resource constraints and numerous interfaces.

This presentation will examine the advantages and challenges of dependency-rich service projects, and will provide a historical and organizational context for the application of service projects in the HRP research environment. In addition, it will discuss the development of ISSMP's innovative processes designed to accommodate variable and compressed timeframes, yet capable of rapid adjustments to a complex environment subject to internal and external uncertainties.

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